

# INTERNATIONAL SEARCH REPORT

Internal application No  
PCT/US2004/017736

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/32 A61K39/07 A61P31/04 C07K16/12

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ALKAN, SEFIK S. ET AL: "Antigen recognition and the immune response. Capacity of L-tyrosine-azobenzene arsonate to serve as a carrier for a macromolecular hapten" JOURNAL OF IMMUNOLOGY, 107(2), 353-8 CODEN: JOIMA3; ISSN: 0022-1767, 1971, XP009039727	1-5, 7-9, 11-33
Y	abstract; page 354, right-hand column, second paragraph; paragraph joining pages 355 and 356; page 356, paragraph joining left- and right-hand column; page 357, left-hand column, first paragraph ----- -/--	6, 10

☒ Further documents are listed in the continuation of box C

☒ Patent family members are listed in annex

### \* Special categories of cited documents

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*&\* document member of the same patent family

Date of the actual completion of the international search

18 November 2004

Date of mailing of the international search report

08/12/2004

Name and mailing address of the ISA

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Authorized officer

Faust1, S

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Intern:      pplication No  
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	<p>GOODMAN J W ET AL: "Immunochemical studies on the poly-gamma-D-glutamyl capsule of Bacillus anthracis. 3. The activity with rabbit antisera of peptides derived from the homologous polypeptide." BIOCHEMISTRY. FEB 1968, vol. 7, no. 2, February 1968 (1968-02), pages 706-710, XP001203672 ISSN: 0006-2960 abstract; page 706; right-hand column, lines 10-13</p>	28-31
X	<p>----- DATABASE MEDLINE 'Online! US NATIONAL LIBRARY OF MEDICINE (NLM), BETHESDA, MD, US; February 1975 (1975-02), KLAUS G G ET AL: "The immunological properties of haptens coupled to thymus-independent carrier molecules. III. The role of the immunogenicity and mitogenicity of the carrier in the induction of primary IgM anti-hapten responses." XP002306078 Database accession no. NLM10166 abstract &amp; EUROPEAN JOURNAL OF IMMUNOLOGY. FEB 1975, vol. 5, no. 2, February 1975 (1975-02), pages 105-111, ISSN: 0014-2980</p>	1-4,7-9, 11-19, 32,33
X	<p>----- SENYK, GEORGE ET AL: "Immune response to glucagon in conjugated form" IMMUNOCHEMISTRY, 9(2), 97-110 CODEN: IMCHAZ; ISSN: 0019-2791, 1972, XP009039720 abstract; paragraph joining pages 98 and 99</p>	1-4,7-9, 11-19, 32,33
X	<p>----- F PRODHOMME EMMANUEL J -P ET AL: "Poly-gamma-D-glutamic acid as a template for functionalized water-soluble biomaterials" ABSTRACTS OF PAPERS AMERICAN CHEMICAL SOCIETY, vol. 219, no. 1-2, 2000, page BIOL 133, XP009039728 &amp; 219TH MEETING OF THE AMERICAN CHEMICAL SOCIETY.; SAN FRANCISCO, CALIFORNIA, USA; MARCH 26-30, 2000 ISSN: 0065-7727 abstract</p> <p style="text-align: center;">----- -/--</p>	1-4,7,8, 11-17

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	<p>SCHNEERSON RACHEL ET AL:                      "Poly(gamma-D-glutamic acid) protein                      conjugates induce IgG antibodies in mice                      to the capsule of Bacillus anthracis: A                      potential addition to the anthrax                      vaccine."                      PROCEEDINGS OF THE NATIONAL ACADEMY OF                      SCIENCES OF THE UNITED STATES OF AMERICA,                      vol. 100, no. 15,                      22 July 2003 (2003-07-22), pages                      8945-8950, XP002306072                      ISSN: 0027-8424                      the whole document</p>	1-33
Y	<p>-----                      LEPPLA STEPHEN H ET AL: "Development of                      an improved vaccine for anthrax"                      JOURNAL OF CLINICAL INVESTIGATION,                      vol. 110, no. 2, July 2002 (2002-07),                      pages 141-144, XP002306073                      ISSN: 0021-9738                      page 143, left-hand column, line 1 -                      right-hand column, line 11</p>	6,10
A	<p>-----                      WELKOS SUSAN ET AL: "The role of                      antibodies to Bacillus anthracis and                      anthrax toxin components in inhibiting the                      early stages of infection by anthrax                      spores"                      MICROBIOLOGY (READING),                      vol. 147, no. 6, June 2001 (2001-06),                      pages 1677-1685, XP002306074                      ISSN: 1350-0872                      abstract; page 1678, left-hand column,                      lines 7-14; paragraph joining pages 1682                      and 1683; page 1684; paragraph joining                      left- and right-hand columns</p>	1-33
A	<p>-----                      WO 01/60412 A (GENZYME CORP)                      23 August 2001 (2001-08-23)                      paragraph joining pages 6 and 7; claims 1                      and 7</p> <p style="text-align: center;">-----</p>	12-14

# INTERNATIONAL SEARCH REPORT

Int

application No.  
PCT/US2004/017736**Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 20-27 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0160412 A	23-08-2001	AU 3834601 A	27-08-2001
		CA 2400205 A1	23-08-2001
		EP 1263472 A2	11-12-2002
		JP 2003522806 T	29-07-2003
		WO 0160412 A2	23-08-2001
		US 2003087877 A1	08-05-2003
		US 2004209842 A1	21-10-2004
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